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LIFT TYPE WEIGHT MEASURING CENTRIFUGE

Technical Field

The present invention relates, in general, to lift type weight measuring centrifuges and, more particularly, to a lift type weight measuring centrifuge which is able to measure the weight of measurement object after spatially isolating the measurement object from a main body.

Background Art

Generally, centrifuges are apparatuses in which a rotor holding a bucket, in which a sample is placed, is rotated at high speed to apply high centrifugal force to the sample, so that a high density fraction is moved radially outwards and a low density fraction is moved radially inwards, thus separating the fractions from each other. FIG. 1 is a perspective view showing a conventional automatic balancing centrifuge. As shown in FIG. 1, the automatic balancing centrifuge includes a base 110, a centrifugal motor 120 which is supported by the base 110, a rotor 130 which is coaxially coupled to the centrifugal motor 120 and has a rotor lever 160, and a bucket 140 which has a predetermined volume to contain therein a desired sample 150 to be separated into fractions. The rotor 130 is provided with an upper housing 172 having a cubic cap shape and a lower housing 174 in which one rotor lever 160 is mounted. The rotor lever 160 has a lever central body 161 which is positioned at the center of the rotor lever 160, and two rotating arms 162 which are coupled at opposite ends of the lever central body 161 by hinges 163, thus being rotatable vertically. A pressure sensor 168 is mounted on a lower portion of each of the rotating arms 162 provided at the opposite ends of the lever central body 161, so as to directly sense the pressure of the rotating arm 162. The rotating arms 162 are balanced by the support of the pressure sensors 168. Two lever guide holes 166 are provided at opposite sides on outer surfaces of the upper and lower housings 172 and 174. The rotor lever 160 is inserted through the lever guide holes 166 and is horizontally movable in the lever guide holes 166 to maintain balance. In the drawings, the reference numeral 164 denotes a stop protrusion which is provided on each inner surface of the rotating arms 162 to hold the bucket 140. The